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MCMORRAN

## **CAMPSITE SELECTION**

WHAT FEATURES ARE COMMON TO POPULAR CAMPSITES?

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## ABSTRACT

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- TITLE:** CAMPSITE SELECTION: What features are common to popular campsites?
- ABSTRACT:** As the Forest Service places more emphasis towards increasing customer satisfaction, enhancements to campgrounds such as showers, hookups, and paved roads are increasing construction costs substantially. The end result is a very high per site cost yet we know relatively little about what features influence the selection of a satisfactory camping place. To maximize the investment, each campsite must be carefully designed, including as many of the features customers are seeking and protecting those features when building support elements such as roads and toilets.
- Research and marketing studies have determined at least some of the dynamics of group decisions and locale selection. Some of the same motivations influence campsite selection. Direct observation of the selection process indicates that the process is quick and visual. Comparing sites which are selected often to those sites not selected as often reveals that spatial aspects of the campsites are the key factors influencing site selection.
- The spatial features that influence campsite acceptance can not be readily determined from site plans. There seems to be an instinct to seek a sheltered location for camping, not unlike finding a cozy room or cave. Features like *walls*, *ceilings*, and *windows* created by vegetation and land forms surround spaces in which camping occurs.
- Today's high construction costs for campgrounds demand that each site have good customer acceptance. The campground design sequence should be modified to identify and preserve camping places and then place support facilities around those places.
- KEYWORDS:** Campsite Selections, Campsite Design, Campground Design, Customer Satisfaction.

## EXECUTIVE SUMMARY

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**Summary:** Why are some campsites more popular than others? Campground managers can often point out favored sites but really do not know what makes them so. Four campgrounds on the Monongahela National Forest's Potomac Ranger District were studied to determine what site features were associated with popular campsites. Each of the campgrounds is located in differing environments and serve different groups.

General aspects of selecting recreational settings have been studied and although centered on general area selections, the concepts of habit, tradition and familiarity can be applied to specific campsites as well. Group dynamics play an important role in campsite selection but one person in the group is likely to determine the final choice. Interviews are difficult with groups and are questionable value since what is said for an interview has been shown to vary considerably from actual behavior.

Observations and interviews have revealed that campers expect tranquility and solitude, facilities to be clean and in good condition and to have an opportunity to observe nature. Security and convenience are other considerations.

The study utilized existing campground use data to determine which campsites are selected most often. Field observations on campsite selection behavior indicated that the selections are usually made with quick visual review from the campground road. Campsites which were selected more often were compared to those not chosen using campsite photos, maps and use plots from data. Observed features were scored and rated to determine importance.

Each campground offered several types of sites; use between types was compared. Conventional single family sites were available in each campground and were the most popular except in the one campground where



sites with electric hook-ups were available. Double sites also were popular on average except in one campground where they were priced significantly higher than the regular sites. Walk-in sites were popular at only one campground where rock climbers use them extensively.

Comparison of the campsites revealed that the most selected campsites usually could be described as rooms with *walls* of vegetation on at least three sides and a *ceiling* of low branches over at least part of the campsite. Gaps or *windows* looking out into adjacent areas were present in some of the most popular sites. Vegetation that did not completely obscure vision into the surrounding area often served the same function as the windows. Architectural steps or land forms also functioned as walls on some sites.

The size and arrangement of the sites was also important. Campsites two to three times the minimum space needed for a table and grill (400-600 sf) were usually the most popular. The least popular sites often were placed on the vehicle spur or in a wide open area with little or no site definition.

Location near the toilets or drinking water (or parking for walk-in sites) was not a significant factor except when room-like characteristics were not available or were nearly equal amongst the available sites. Campsites for recreational vehicles were not much different except that the levelness of the parking spur is the most important feature.

Few negative features were identified. Rocks throughout the campsite, wet ground and generally uneven ground were noted on some of the least chosen sites. Observation of the use data plots indicated that usually several of the sites were exceptionally popular but that the least selected were not as far below the mean as the popular were above it.

The features identified are simple to describe but very difficult to show in a site plan. On-the-ground reviews are essential. The current practice of engineering roads, toilets and utilities first and then *building* campsites after results in sites that lack the sense of 'place' and therefore do not meet the visitor's expectations or needs. With the cost per campsite nearing that of a small house, campsite design deserves more attention. Camping places should be identified first and then protected as the support facilities are built around them.



# INTRODUCTION

## WHERE AND WHY OF CAMPSITE SELECTION

This project attempts to identify the features that are common to the most popular campsites on the Potomac Ranger District. It is generally accepted that several campsites in each campground on the district attracted more use than the others. Why?

When asked, campground managers would state many reasons such as "it's a nice big level site", "its close to the toilets", or "that's because the same families use it every year". These statements did not give much with which to base future site design on and, it turns out some of these simply are not the case. Many other sites in the same campground appeared the same based on those observations.

I also wondered if there was a reverse condition. Are there sites that discourage use: campsites that are significantly not selected and if so what features or lack of features caused this?

## AREA STUDIED

Four district campgrounds were studied. Each has a unique setting and contain several differing types of camping opportunities.

**Big Bend Campground.** The South Branch of the Potomac River surrounds Big Bend Campground on three sides. The peninsula slopes toward the north and has steep slopes into the river on two sides. Only the campsites on the north edge of the campground have direct river access. In the middle 1880's the site was cleared for a farm. It remained open fields until twenty years ago. Mature trees surround the edges of the campground and occur at the old homesite and cemetery near the middle of the campground. Heavy plantings of fast growing trees and shrubs have enclosed the area, although large shade trees are not present at most sites. Sites on the south edge are high above the river and offer occasional views of the river below.

The camp has three loops. The lowest is on the north side and contains 12 sites, 7 of which back directly onto the river. A high dense patch of vegetation separates the sites from the river however. This section of the campground is open from March through November. All the sites are conventional single family campsites with a table, fire ring, tent

pad (14' x 14' wooden frame with sandy soil inside), lantern post and gravel parking place. The sites are relatively level. This group of sites was treated as one study group.

Roads and steep hillsides separate the other two loops of the campground from the river. This area is open a shorter season, usually May through September. Since the use season is different and the river makes the lower loop substantially more popular, the 30 regular sites in the upper loops were studied as a separate group. In design they are similar to the lower loop except that no constructed tent pads exist. The remaining 4 double sites formed too small a sample to study meaningfully.

**Red Creek Campground** has twelve sites. Located in the Dolly Sods Scenic Area, a high wind swept plain, it is well known for its stark beauty and northern Canadian environment. The camp is very popular, and is often full. The camping area occupies the site of an old cabin, its spring and access creating the camping opportunity. An open meadow and a thicket of immature hardwoods are the existing vegetation types. The site, like most of the 'sods' is wet and wind blown, and it is the only campground in the area.

Two of the campsites are walk-in with a central parking area. The other 10 sites are primitive, single family sites each with table, fire ring, lantern post and vehicle access.

**Spruce Knob Lake Campground** occupies a heavily forested hillside near Spruce Knob Lake. None of the campsites are directly adjacent to lake; most lake users drive to the boat ramp about a quarter of a mile away.

The camp has three types of campsites; single family sites, two family sites and walk-in sites. The three double sites were not studied. The 27 regular sites and 12 walk-ins each have a table, fire ring, lantern post, tent pad and parking place adjacent to the site (or a short distance away at the walk-ins).

**Seneca Shadows Campground** opened for the first time in April of 1990. The campground lies next to Seneca Rocks in the Spruce Knob-Seneca Rocks National Recreation Area. It has seven different types of sites and the environment varies from a mature oak forest to open fields. Campsite choices include single or double sites, single and double sites each with electric hook-ups, single and double



walk-in sites and groups sites. The 18 regular and 7 double sites are situated in the mature forest part of the campground on a sloping bench above the valley bottom. There generally are no views, screening between sites is fairly heavy. Cut banks or fill slopes restrict some of the sites.

In the middle of the campground, at the edge of the forest, are the 13 sites with electric hook-ups. Settings range from deep woods to open meadow, with the open sites offering spectacular views of Seneca Rocks. The slopes here are more gentle, with few cut banks or fills. Three of the electric site are double; they were not studied.

The walk-in sites lie in a large open field. They are the closest to Seneca Rocks and most provide an outstanding view. The area gets heavy use by the rock climbers who frequent the rocks. Campsites along the edges back onto fence rows (trees) or the forest edge but there is no screening between sites other than tall grass. This area includes 30 sites with a table, fire ring and tent pad and 10 with two tent pads. Parking is nearby.

## LITERATURE REVIEW

### ANALYZING THE CHOOSING PROCESS

Before comparing the 'good' sites to the 'duds' I researched the choosing process. What is known or suspected about the process that ultimately leads to the choice of a campsite?

A study by Clark and Downing (1984) summarized (from other studies) some general aspects of selecting a recreational setting:

1. Habit, tradition
2. A desire to be in a place of expected stability, reliability, familiarity in a changing world
3. A desire for psychological distance--to be far enough away to feel like they have gotten away,
4. to explore for new and known territory or
5. to accommodate particular needs and constraints of a trip.

While these considerations primarily deal with the choices made in deciding where to go (macrosite) they also must carry over to some extent in picking the campsite (microsite). Experience and habit probably are an important aspect, selecting sites

that look like ones that resulted in satisfaction in the past.

The choice of one campsite over another is usually a group process since individuals seldom use developed campsites. These groups must compromise their individual desires in order to select collectively one of the available campsites. Past experiences, differential 'power' of the individuals in the group, and individual expectations influence the decision process. Not all needs or preferences of everyone within the group will be met. (Clark and Downing, 1984)

Individuals and groups behave differently than they say they will or should (Clark and others 1972). Hence, interviews or questionnaires requesting information on why a particular site was selected may not reveal the real reasons or features that lead to the choice of that site.

Ground observation is a logical way to avoid two problems; people often don't do as they say, and, the difficulties in determining group consensus with questionnaires. Reviewing which campsites people actually chose should reveal common features.

Some observations of the choosing process can lead to narrowing down the variables the group considers. Most site selection occurs in the afternoon or evening. Initial screening of the choices is made from the vehicle as the group drives through the campground. Usually, only one or two sites, if any, are reviewed by walking into the site and looking at it. Usually once the vehicle has pulled into the site, the group remains there unless important, and how the camp looks from the road is key to its selection.

An evaluation of shade, often stated as an important feature for a campsite, usually cannot occur in the late afternoon since shadows are long or absent. The promise of shade, from nearby vegetation, may be important especially for experienced campers.

Privacy is also cited as an important desire. If so, sites obscured from view from the road should be popular. The question then is how does the group select it if they cannot see it? Clark and others (1971) found that users of developed settings expected to enjoy tranquility and solitude but do not seek exclusion from neighboring campers. In a study of two campgrounds in the Adirondacks by Conneilly, Brown and Wilkins 1985, campers indicated the most important aspects of their camping



experience to be solitude/rejuvenation, facility characteristics, and nature. Facility characteristics were only broadly defined as being in good repair, clean and many services nearby.

Security or freedom from victimization is another aspect of site choice in a study by Clark and Downing in 1984. How site characteristics are perceived in this context may be similar to those in the Conneily study but would appear to be very subtle within a campground where maintenance and cleanliness could be expected to be about the same from site to site.

Convenience as related to proximity to rest rooms or water supplies may be a factor, however traffic to and from those convenience can also compromise privacy.

Generally, while there are some clues to motivation and abstract site features, I found little information on what campsites should actually look like to be selected.

## METHODOLOGY

The study portion of this project involved the following steps:

1. data collection,
2. data analysis,
3. comparison of analysis data to the campsites
4. developing a potential list of significant features and
5. scoring the features and testing their significance.

Data collection consisted of documenting how many days each campsite was used. Campground fee compliance worksheets were used for this purpose.

Data analysis compiled the data into lists that ranked each campsite based on its use compared to other similar sites. It also generated graphs plotting relative use levels in each campground by date and campsite. The final step in this process was the sites themselves.

Sites that were significantly high or low in use were selected for comparison. Sites that had use outside one standard deviation from the mean (average) use were used. This cutoff level avoided the prob-

lem created by differing occupancy rates in each of the campgrounds and between types of sites. The comparison sets contained the sites that had use higher or lower than 68% of a normally distributed group. High sites were compared with low sites and the differences noted.

The comparisons were then reviewed and compared to factors considered significant in the literature. From this, a list of features to look for was developed. Scoring was attempted on several of the groups of sites and refined.

Once a reasonably objective set of features and scoring basis was developed, all the sites, including the average ones were scored. A computer spreadsheet was used to compare the scores with the actual ranking. The feature scores were subsequently weighted until the computed ranking was close to the real one. At this point the relative importance of the factors was understood.

## ANALYSIS

Initially I had intended to look at which sites were selected when the campgrounds were nearly empty and compare that to those that were not selected when the camps were nearly full. This proved to be a difficult task with the software available and the wide ranges in use data.

Use levels at each of the campgrounds and between the different types of sites are substantially different so no single cut off levels for high use or low use could be used. For example, selecting only those days when use exceeded 75% for determining low use sites netted only two days at Seneca Shadows but over 90 days at Red Creek.

I also found that there did not seem to be the need for screening. Looking at the most popular sites in Big Bend when it was 25% or less full yielded the same results as looking at all the days. A similar review of Red Creek using 50% or less came to the same conclusion.

By comparison, however, looking at Big Bend when it was 75% full and Red Creek when it was 90% full suggested that there was no significant difference between which sites were not selected. It appears that non-selection is more chance than avoidance when the camp was nearly full. When reviewing all



the dates, however, some sites were selected significantly less than others.

TABLE 1-GROUPS STUDIED

CAMPGROUND	TYPE SITES	SITE NUMBERS INCLUDED
Red Creek	Regular	3-12
Big Bend	River Regular	1-12 13-46 exc.20,29,34,36
Spruce Knob Lake	Regular Walk-in	1-30 exc.3,4,20 31-42
Seneca Shadows	Regular  Double Electric Single Walk-in Double Walk-in	1-25 exc.2,6,10,12,13,16,21 2,6,10,12,13,16,21 26-37 exc.31,34 42-79 exc. those below  41,48,49,50,53, 60,63,70,80

Based on those observations I decided use the entire database in determining the popularity of each campsite. The groups studied are shown in Table 1.

Campsites in each of the ten study sets were ranked based on the number on nights they were used. Their frequency of use was compared to the mean (average) for that group and the standard deviation of the group. Sites that had a frequency of use outside one standard deviation were considered significantly high or low. The significantly high and low were then compared for absence or presence of features. Table 2 illustrates this analysis.

Campsites were photographed from the campground road to approximate their appearance to campers making a selection. Use figures were also plotted on a map of the campground and a graph to help with the review.

Early in the analysis of the data it became obvious that use levels between the selected groups varied considerably. The 10 regular sites in the Red Creek Campground and the 12 river sites in Big Bend could not be compared to the sites at Seneca Shadows. The lowest used sites at Red Creek and Big Bend were used more than the highest in Seneca Shadows. Why persons choose one campground over another was beyond the scope of this project.

TABLE 2-ANALYSIS OF USE

CAMPGROUND Type of site	# of site	std. dev.	LOW USE	AVERAGE USE LOW MID HIGH			MAX USE	BELOW 1 STD	ABOVE 1 STD
BIG BEND -River Sites -Regular Sites	12 30	24 14	49 14	62 23	86 37	110 51	128 69	1 5	3 5
RED CREEK -Regular Sites	10	18	69	83	101	119	128	3	3
SPRUCE KNOB -Regular Sites -Walk-in Sites	27 12	29 9	13 13	32 15	61 24	90 33	123 39	4 3	6 3
SENECA SHADOWS -Electric Site -Regular Sites -Double Sites -Walk-in:1tent -Walk-in:2tent	10 18 7 30 10	12 8 5 13 11	11 11 2 3 7	19 14 1 6 11	31 22 6 19 22	43 30 11 32 33	46 35 17 63 46	3 4 - 3 2	1 5 1 4 2

The Monongahela National Forest is committed to providing a range of camping opportunities and therefore provides differing types of sites within the campgrounds. Single sites, double sites and walk-ins are usually the range of opportunities offered. How many of each is provided is usually based on site conditions rather than any knowledge of what

demand exists. The data collected for this project provides some insight.

## BIG BEND CAMPGROUND

Big Bend Campground averaged an occupancy rate of 26%. The 12 sites next to the river are open

more days but never-the-less average more than triple the occupancy rate of the other sites, 67% to about 20%. The double sites are slightly less popular than the regular sites. Surprisingly, when looking at the 12 sites in the river loop, the most popular sites were not the ones that backed onto the river (heavy vegetation blocks river views). Proximity

seems to be enough. The differences in use between the most selected and least selected is very pronounced. The most popular sites in the river loop are selected more than twice as often as the least popular. This difference is even greater in the other two loops.

## Big Bend Campground

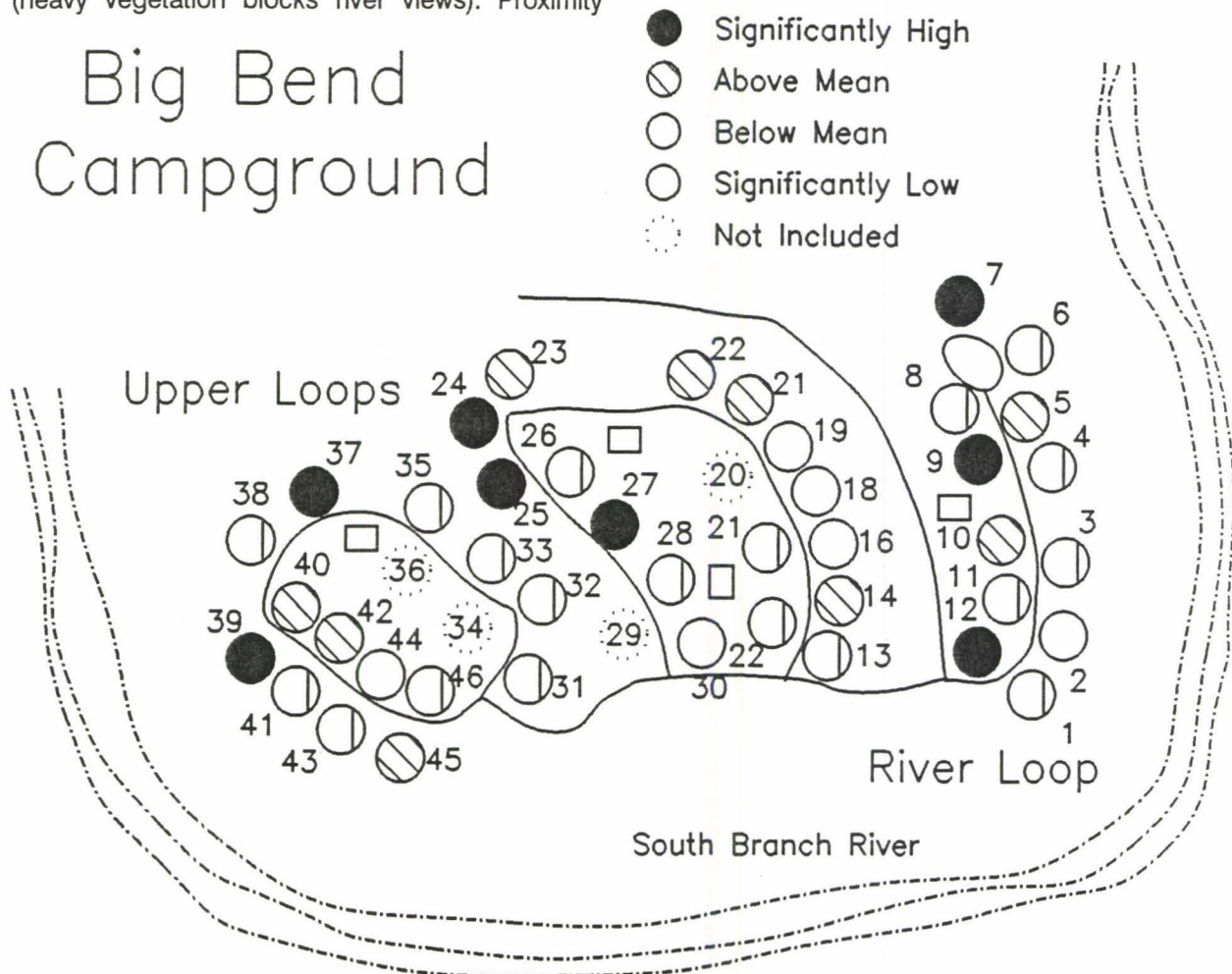


TABLE 3-BIG BEND USE

Type campsite	#	AVERAGE		MINIMUM		MAXIMUM	
	SITES	DAYS	%	DAYS	%	DAYS	%
Regular by River	12	86	67%	49	19%	128	49%
Other Regular	30	37	22%	14	8%	69	41%
Pull Through	1	31	18%	-	-%	-	-%
Double Site	3	34	20%	22	13%	44	26%
TOTAL CAMP	46	49	26%	22	13%	128	49%



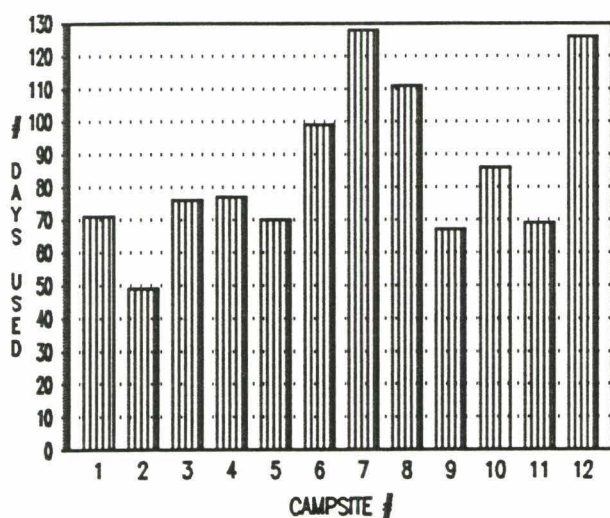
## RIVER SITES (1-12)

Three sites, 7, 9, and 12 fell above one standard deviation and one, 2, was below one deviation. When looking at the plan it is surprising that the high sites are not on the river side of the road and that the low site is. The toilet location and water hydrants do not seem to be a factor.

When comparing the photographs the notable features present in the high sites is that each adjoins a heavily shaded area of closely growing trees with head height branches. They also are surrounded on three sides with vegetation but these 'walls' are broken by gaps that open into other areas.

The low site lacks much overstory and adjoins an not mown open area over about one third its circumference. Its parking spur appears sloped. The site appears smaller since much more of it has ground cover- this is a result of less use; not the cause of it.

FIGURE 1 - BIG BEND RIVER LOOP USE



## UPPER LOOPS

Of the 30 sites in this group, ten fell outside the first standard deviation, close to normal. Five sites 16, 18, 19, 30, and 44 were lower and 24, 25, 27, 37, and 39 were higher. When looking at the use graph the

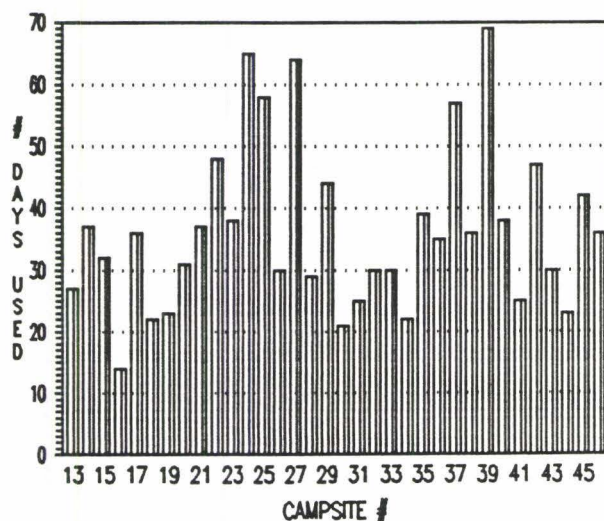
high sites were much farther from the mean than the low sites. This may mean that attractions determine campsite choice rather than features discouraging use at other sites. Since these sites are open at the same time that the river sites are open the total range of choices is actually out side this set. Groups selecting these sites may be looking for more solitude and quiet than those in the more crowded river loop.

The high sites are near a rest room, but so is one of the low sites. Three of the low sites are among those that are farthest from a rest room so there may be some relationship.

The high sites all contain room-like qualities noted in the River Loop, occupying an opening in the forest where vegetation is large enough to act as a wall and to provide some overhead cover. The window feature noted in the River Loop was not pronounced.

In comparing the high sites to the low sites the differences are marked. The low sites are smaller in scale. The vegetation is lower but thicker allowing little opportunity to see beyond the campsite and very little overhead cover if any. They are also smaller in area, closer to the road and crowded against the parking spur.

FIGURE 2 - BIG BEND UPPER LOOPS USE

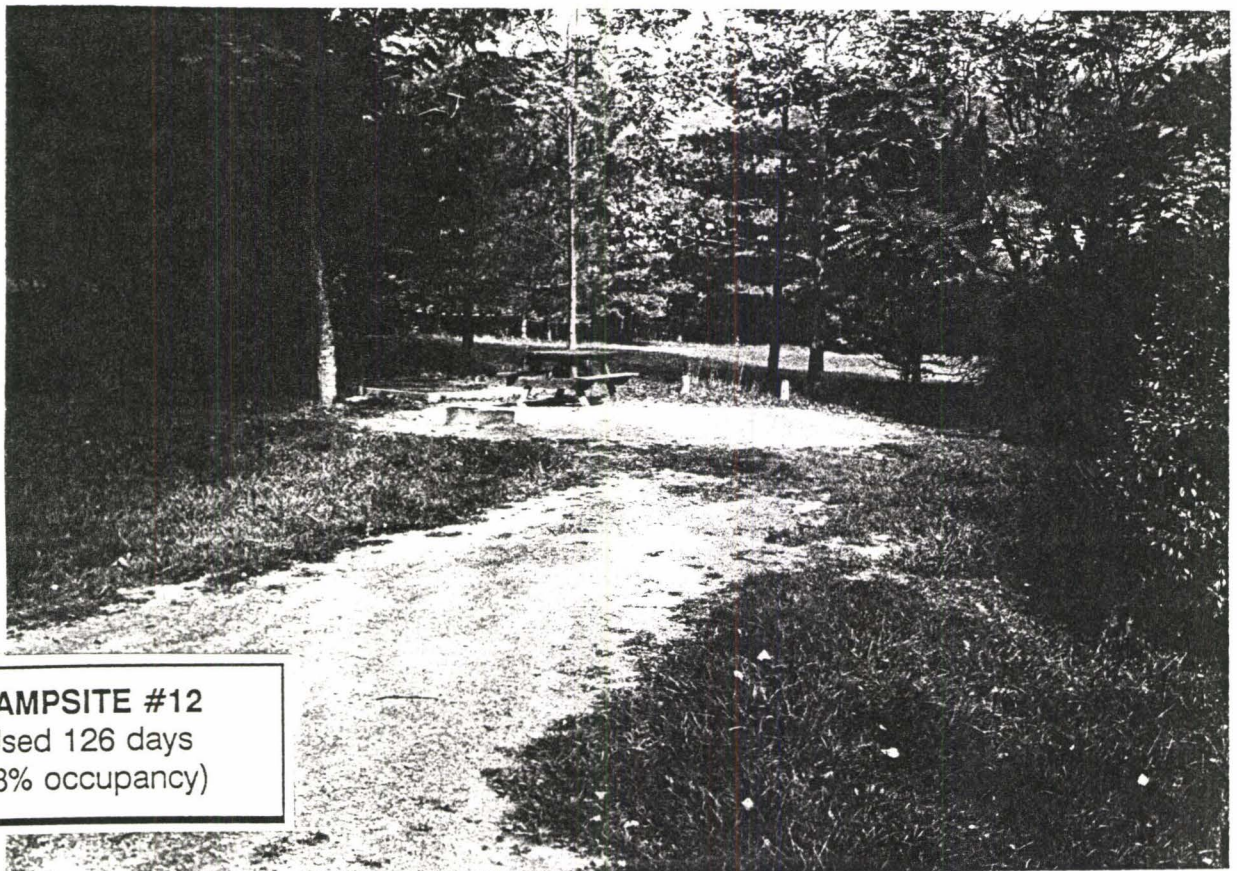






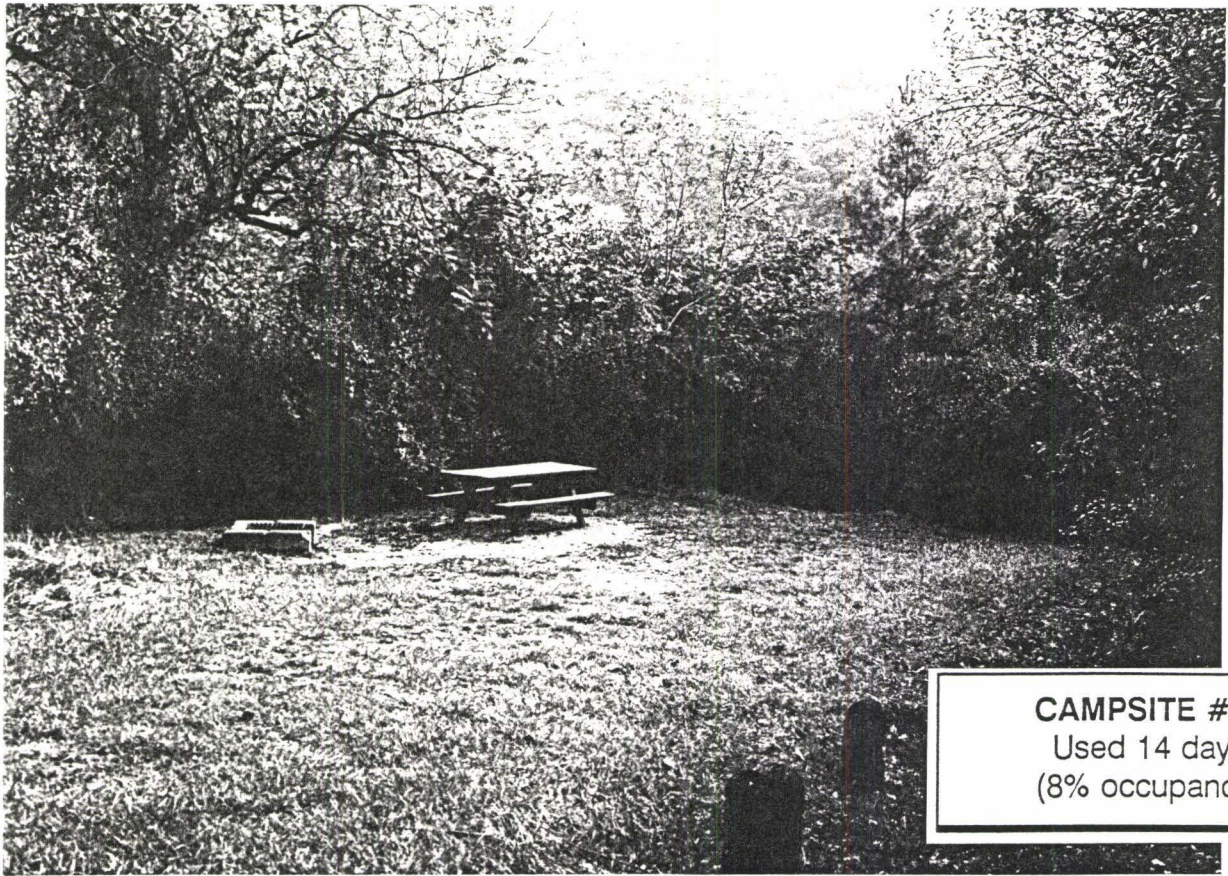
**CAMPSITE #2**  
Used 49 days  
(19% occupancy)

**BIG BEND RIVER LOOP- High and Low Site Example**



**CAMPSITE #12**  
Used 126 days  
(48% occupancy)





**CAMPSITE #16**  
Used 14 days  
(8% occupancy)

**BIG BEND UPPER LOOPS- High and Low Site Example**



**CAMPSITE #39**  
Used 69 days  
(41% occupancy)



## RED CREEK CAMPGROUND

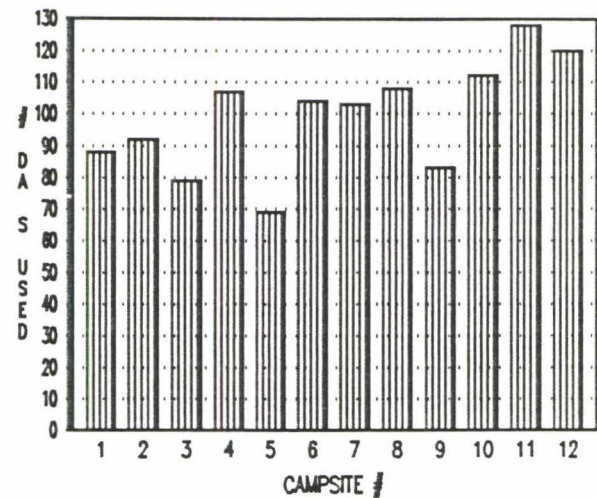
Red Creek Campground averaged the highest use of all campgrounds studied. The average occupancy rate of 42% reflects about 100 days use per site per year, at least double of all other camps. It is the least developed and the sites show substantial wear. Location, on Dolly Sods, is the key feature here, over riding the lack of other features campers are looking for in a campsite. The walk-in sites were about 5% less popular than the conventional sites overall but were more popular than the three least chosen regular sites. The most popular site was twice as popular as the least popular.

Half the sites fell outside the first standard deviation, showing a higher than normal variation. In looking at the use graph three sites 3, 5, and 9 are noticeably lower than the rest of the group. The two high sites, 11 and 12 are not nearly as pronounced. It would appear that the three low sites here either have features that discourage selection or totally lack the attributes that cause the others to be selected.

The difference between the high sites and low sites is obvious when looking at the photographs. The two high sites occupy the most mature forest area in the campground. They are well defined with mod-

erate sized trees and vegetation that provides cover and shelter. The low sites have a noticeable lack of screening and vegetative shelter; site 3 has none at all. In addition the other two low sites are rocky and uneven. They also are often wet. None of the sites are particularly closer to the toilets. The high sites are the farthest from the water.

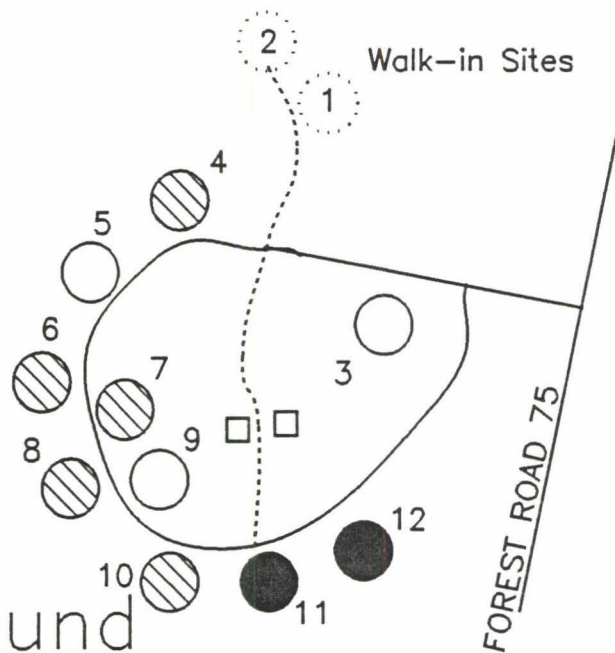
FIGURE 3 - RED CREEK SITE USE



In this campground, room-like qualities clearly encourage selection.

- Significantly High
- ◐ Above Mean
- ◑ Below Mean
- Significantly Low
- ⊙ Not Included

Red  
Creek  
Campground

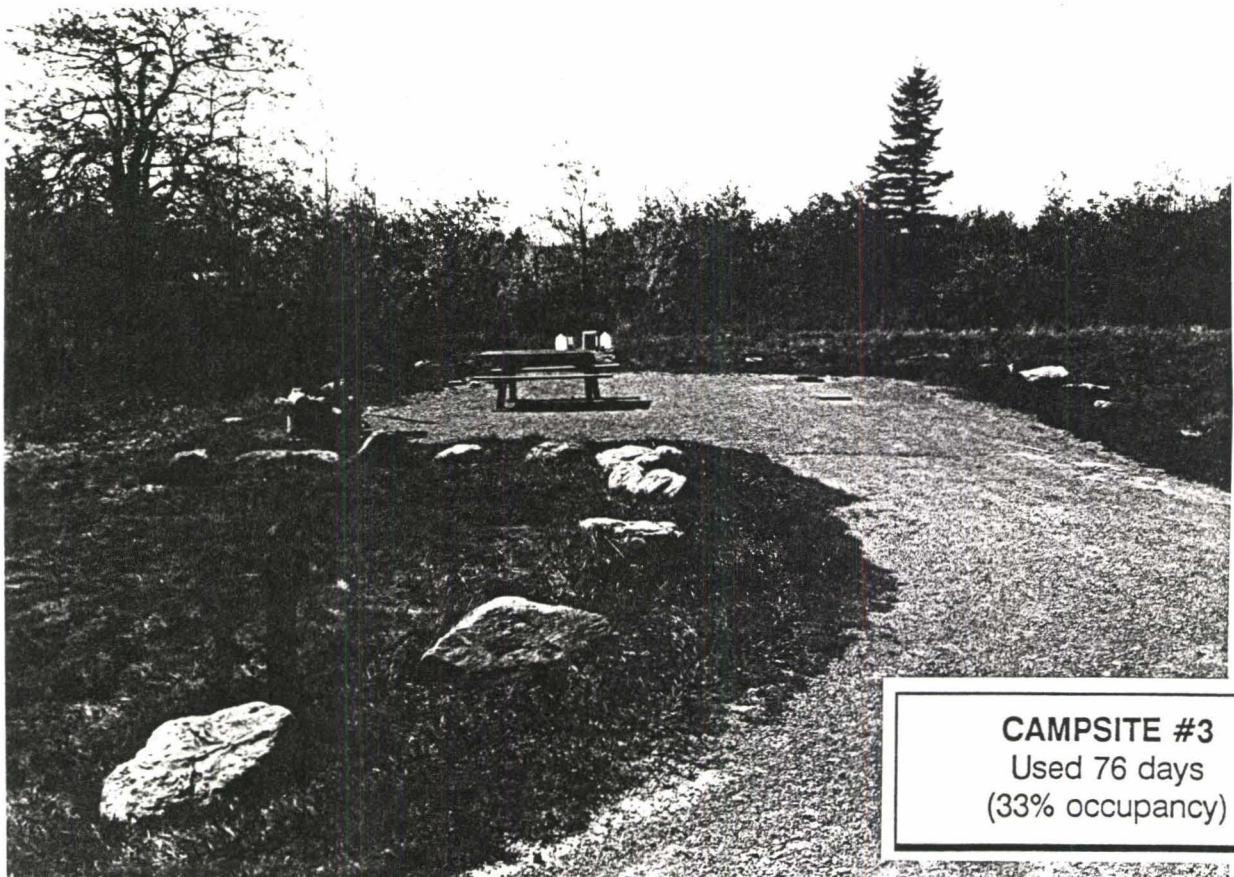






**CAMPSITE #11**  
Used 128 days  
(54% occupancy)

**RED CREEK CAMPGROUND- High and Low Site Example**



**CAMPSITE #3**  
Used 76 days  
(33% occupancy)



TABLE 4-RED CREEK USE

RED CREEK	#	AVERAGE		MINIMUM		MAXIMUM	
Type campsite	SITES	DAYS	%	DAYS	%	DAYS	%
Regular	10	101	43%	69	29%	128	54%
Walk-in	2	90	38%	88	37%	92	39%
TOTAL CAMP	12	99	42%	69	29%	128	54%

## SPRUCE KNOB LAKE CAMPGROUND

Spruce Knob Lake Campground was rebuilt recently and at first look the sites appear to be similar to each other, with the exception that 12 are walk-in sites. The regular sites show a huge range of use however, more than at any other site studied. The most popular site was occupied 46% of the time (123 days) while the least popular was occupied only 5% (13 days). The 12 walk-in sites averaged a 9% occupancy, generally on days when most of the drive-in sites were occupied. The least popular walk-in is no less popular than the least popular drive-in. The several double sites averaged the same occupancy as the regular sites.

### REGULAR SITES

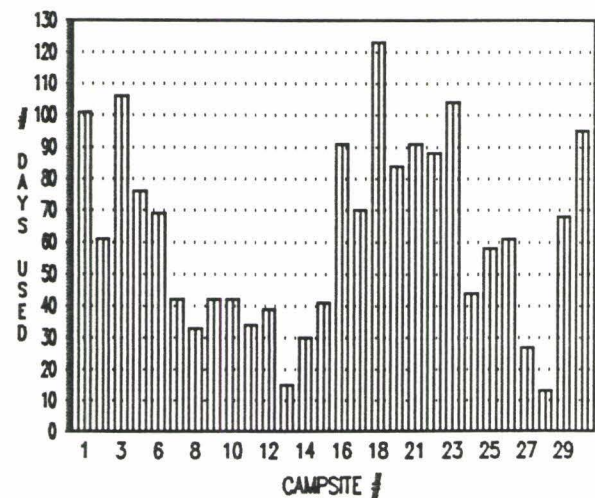
Spruce Knob Lake Campground, unlike Red Creek and Big Bend, is situated in a mature forest setting. All the sites initially seemed shaded and surrounded by trees. This campground experiences a wide range of choice, however. Campsite 18, the most popular is chosen 10 times more often than the least popular, site 28. Ten of the 27 sites in this group are out side the first standard deviation, more variable than normal distribution would suggest.

The comparison of the photographs was much more difficult. I found that the 'room' concept could be applied but that ground form, relationship to the parking spur and height of the lowest part of the tree canopy were factors. The low sites lacked definition. Sites 13 and 27 appear located on the parking spur- no real camping place is apparent. Sites 14 and 28 have some definition on two sides but lack any low

branches to act as a 'ceiling', are close to the road and are somewhat uneven.

The high sites have a definite place to camp distinct from the parking spur. The forest is close to the sites but isn't so dense as to block views into it. Low branches act as a ceiling.

FIGURE 4- SPRUCE KNOB LAKE REGULAR SITES USE



### WALK-IN SITES

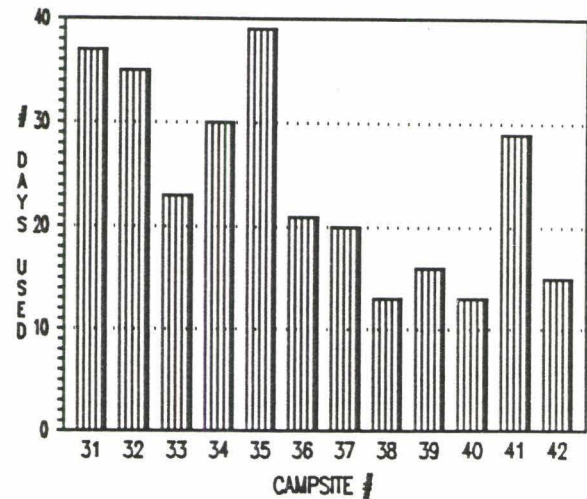
The Walk-in sites at Spruce Knob Lake often serve as an overflow area for the regular sites. The three most selected are used only slightly more than the least popular of the regular sites. These sites 31, 32, 35 probably do contain some feature which walk-in

campers are after in addition to those features that regular campers want. They seem to fit the forest room idea, however the relationship to the parking is less important. Site 31 is not visible from the road and site 35 only slightly so.

The low sites tend to be visible but a long way from the parking. The sites themselves are small and poorly defined.

Proximity to the toilets and water do not seem to be a feature affecting choice.

FIGURE 5-SPRUCE KNOB LAKE WALK-IN SITE USE



## SPRUCE KNOB LAKE CAMPGROUND

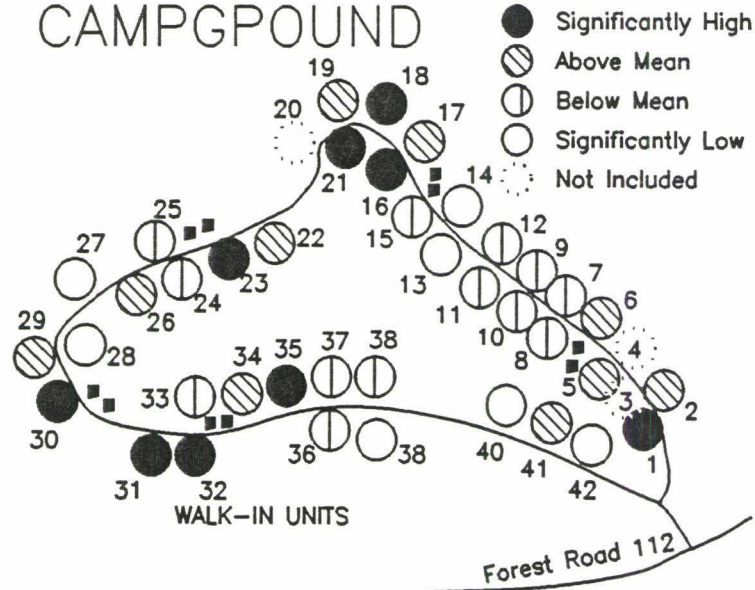


TABLE 5 - SPRUCE KNOB LAKE USE

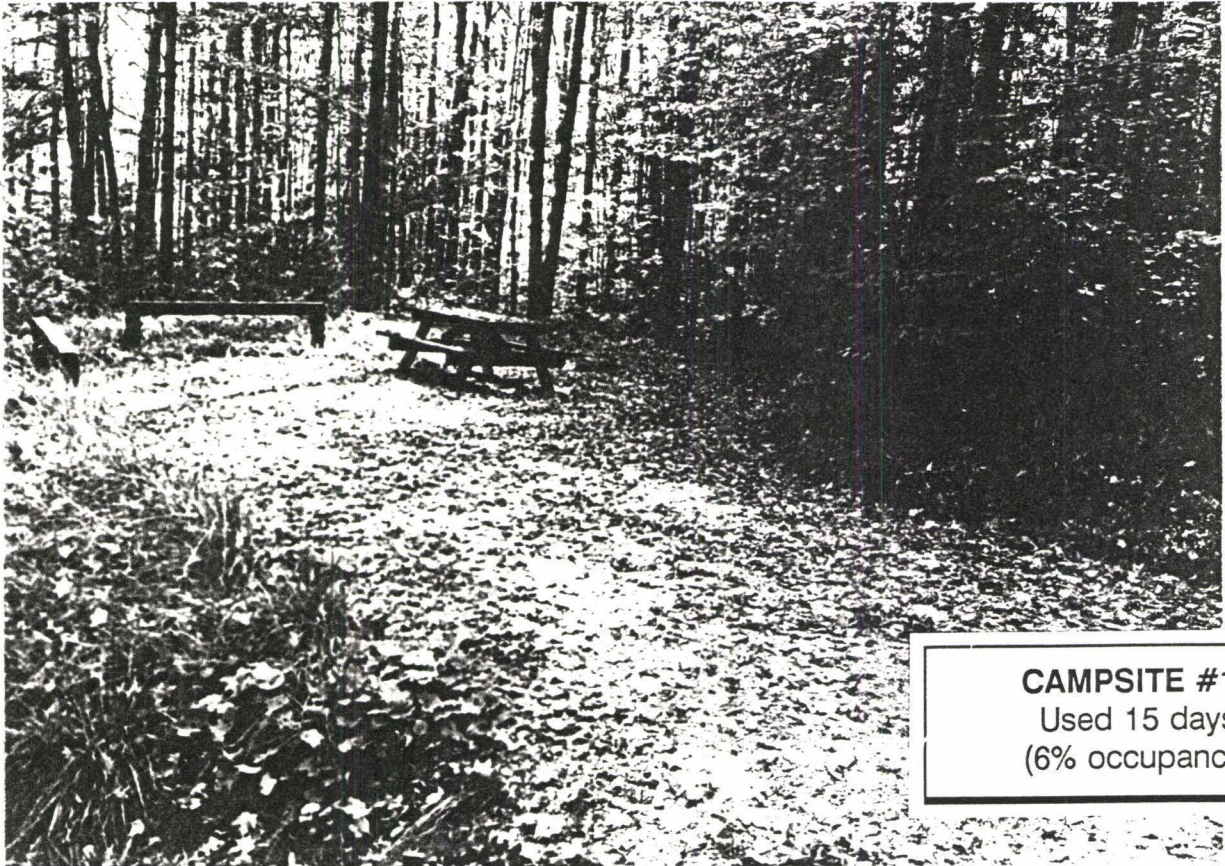
SPRUCE KNOB LAKE	#	AVERAGE		MINIMUM		MAXIMUM	
Type campsite	SITES	DAYS	%	DAYS	%	DAYS	%
Regular	28	61	23%	13	5%	123	46%
Walk-in	12	24	9%	13	5%	39	15%
Pull Through	1	51	19%	-	-%	-	-%
Double Site	2	71	27%	-	-%	-	-%
TOTAL CAMP	43	50	19%	13	5%	123	46%





**CAMPSITE #18**  
Used 123 days  
(46% occupancy)

### SPRUCE KNOB LAKE REGULAR SITES- Examples



**CAMPSITE #13**  
Used 15 days  
(6% occupancy)



## SENECA SHADOWS CAMPGROUND

Seneca Shadows Campground is the newest, least known and most developed campground. The only camping to occur in the area previous to its opening was at several commercial campgrounds and by climbers in a throw-down area (now closed). These aspects undoubtedly affect the use levels in the campground.

Site choices in Seneca Shadows probably overlap; groups decide what type of site as well as which site they want. The \$2 additional charge is not enough to completely discourage a tent camper from select-

ing a site with hook-ups if other factors make the site the most desirable.

Several of the single tent walk-in sites had the highest use rates in the campground- 39%, however, overall, the regular sites with electric hook-up averaged the highest occupancy rate- 19%, the small group sites average ranked 2nd at 16%, followed by the double walk-ins (14%), regular sites (13%) and then the single walk-ins (12%). Considering the newness of the campground these differences probably are not significant. The very low use of the double drive-in sites probably is significant however. These sites cost double the regular sites (\$20 and \$24) and offered only a double parking place and extra tent pad.

TABLE 6 - SENECA SHADOWS USE

SENECA SHADOWS	#	AVERAGE		MINIMUM		MAXIMUM	
Type campsite	SITES	DAYS	%	DAYS	%	DAYS	%
Regular	18	22	13%	11	7%	35	21%
Regular w/elec	10	31	19%	11	7%	46	28%
Double	7	6	4%	17	10%	2	1%
Double w/elec	2	11	6%	10	6%	11	7%
Pullthr w/elec	1	3	2%	-	-%	-	-%
Small Group	3	21	16%	15	11%	25	19%
Walk-in	30	19	12%	3	2%	63	39%
Double Walk-in	10	22	14%	7	4%	46	28%
TOTAL CAMP	81	20	12%	3	2%	63	39%

### REGULAR SITES

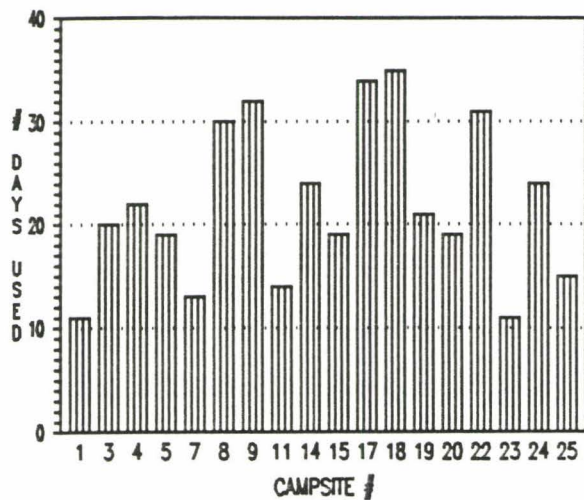
The regular sites varied considerably in their selection levels. The least popular sites, 1 and 23, were used less than a third as often as the most popular, 17 and 18. In all 9 of the 18 sites fell outside a standard deviation. The use graph shows three distinct groups.

Crowding and sense of space appear to be the key factors. The high sites all occupy locations without another campsite on at least one side, but so do the least popular. Three of the four low sites, 7, 11 and

23, however appear squeezed in with the table and stove right next to the parking spur with no separation. Site 1 is separated by a step but still is cramped and lacks any screening from the entrance road. These sites have no sense of a room, the vegetative 'walls' are separated from the sites by cut banks or fills and there is no sense of ceiling.

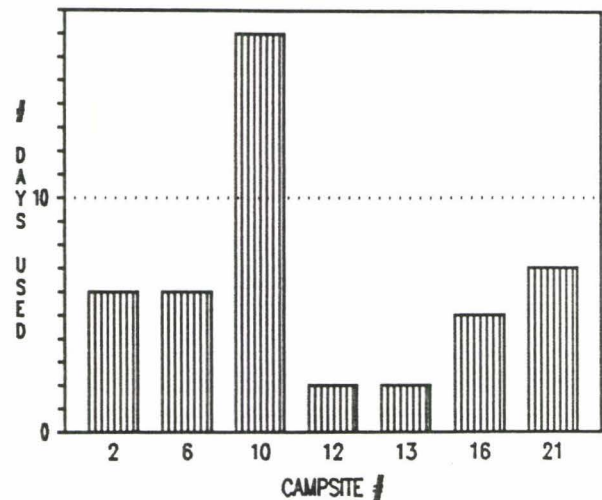
The high sites, (8, 9, 17, 18, and 22), in contrast provide a camping place. The space is separated from the parking spur either by distance or steps, vegetation approaches the sides of the space creating walls and ceiling.

FIGURE 5 - REGULAR SITES USE



sense of space that the low sites in the regular sites group also lacked. Site 10, is isolated at the end of the loop. The high cost of these sites (\$20) probably caused groups to select two regular sites instead.

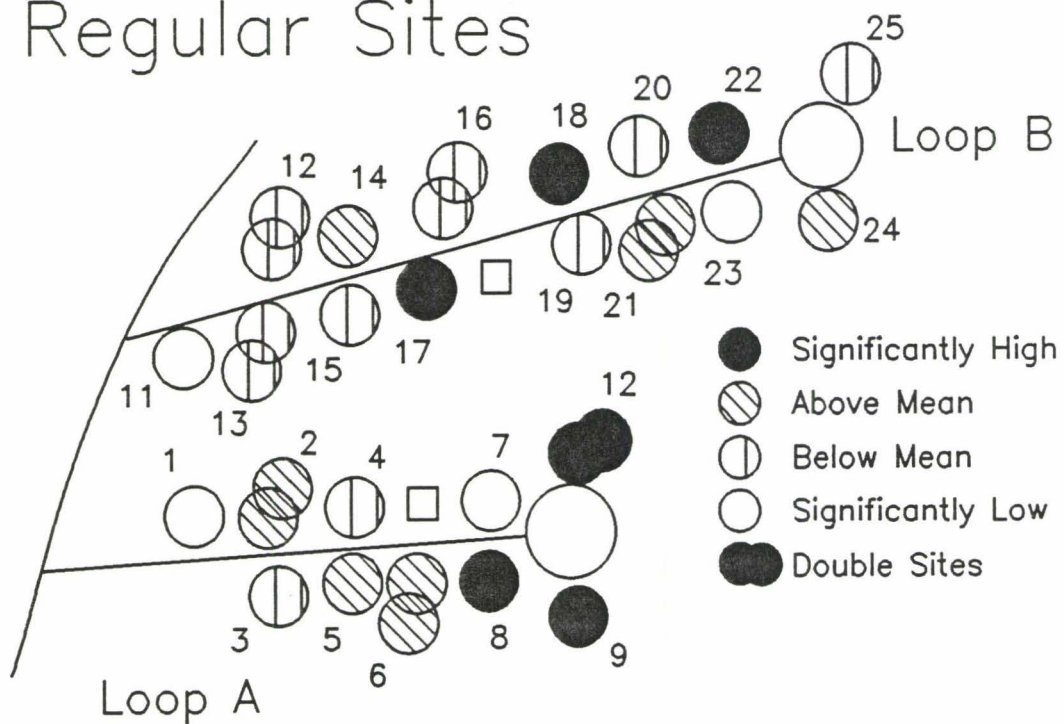
FIGURE 6 - DOUBLE SITES USE



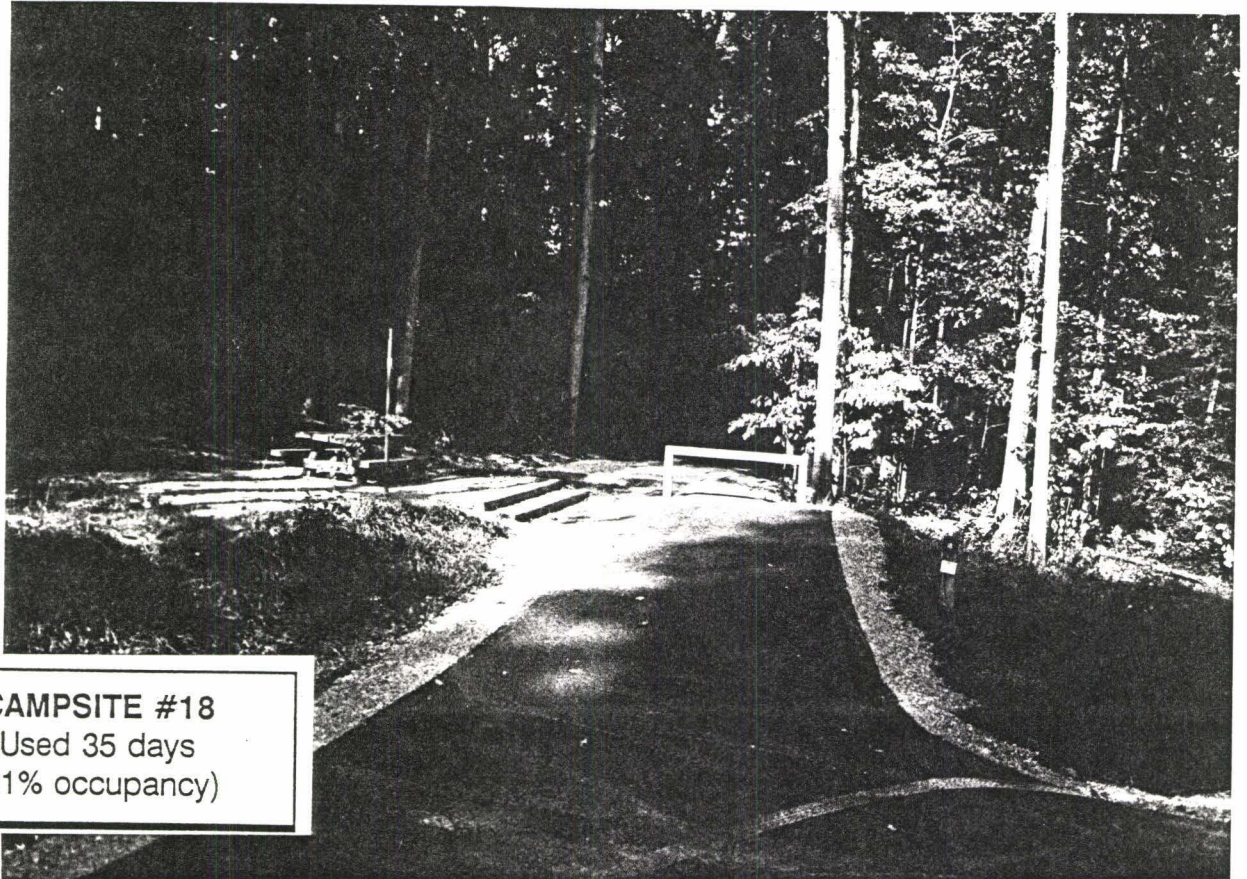
### DOUBLE SITES

The double sites received very little use except for site 10. They generally are very small and lack the

## Seneca Shadows Regular Sites

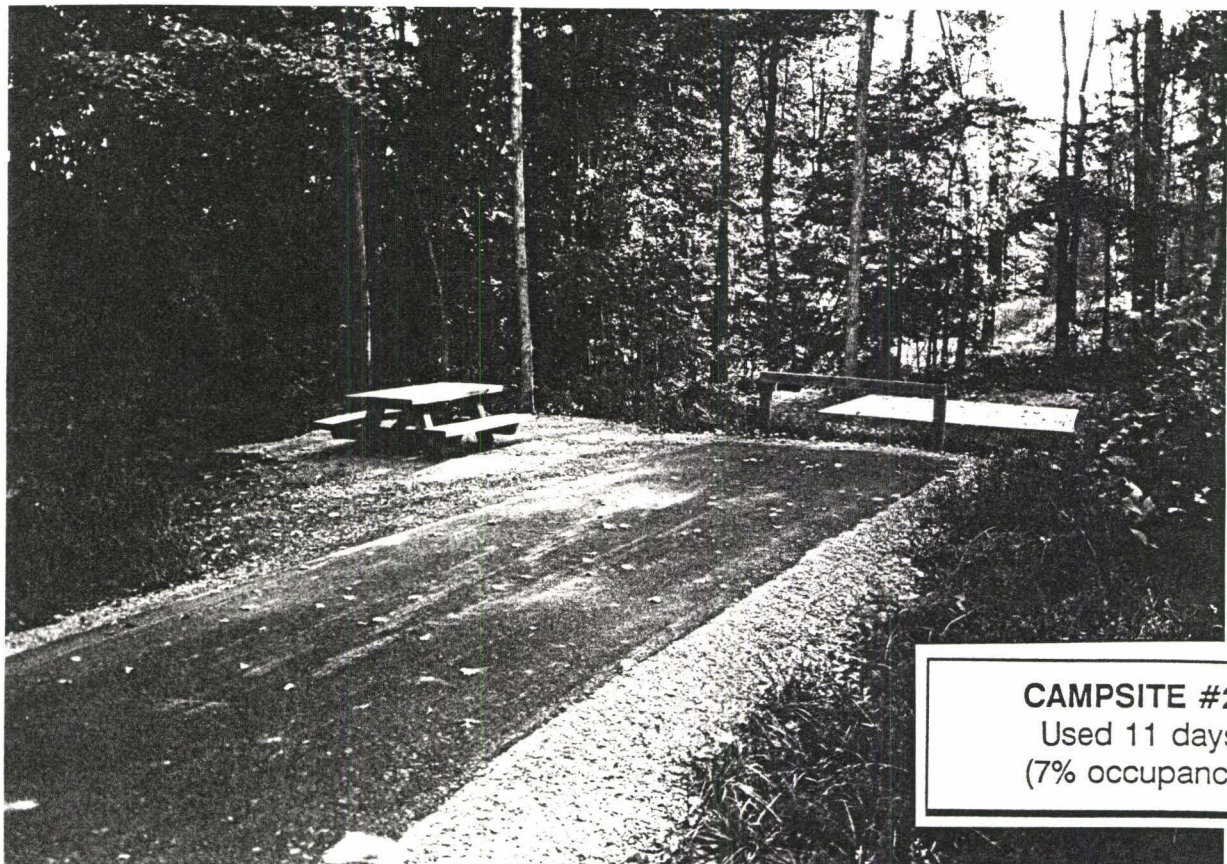






**CAMPSITE #18**  
Used 35 days  
(21% occupancy)

### SENECA SHADOWS REGULAR SITES EXAMPLES



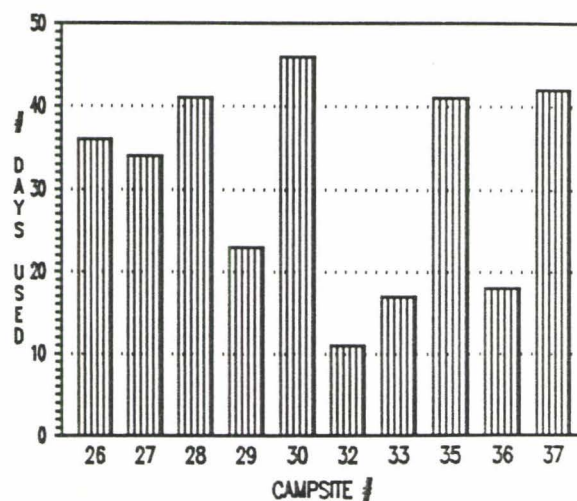
**CAMPSITE #23**  
Used 11 days  
(7% occupancy)



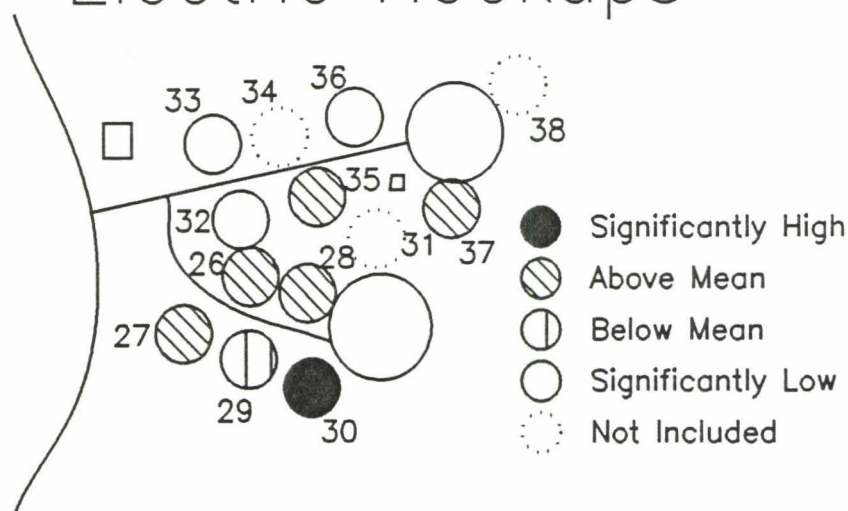
## ELECTRIC SITES

These sites are the most popular, on average, of all the choices in the campground. Tree cover is a major aspect here, with two of the low sites, 33 and 36, having none. The remaining low site is crowded by the other sites and lacks overhead cover. Site definition does not seem as important here however. Level parking and convenience to the table and fire place make these sites more desirable for trailers and motorhomes.

FIGURE 7 - ELECTRIC SITES USE



## Seneca Shadows Electric Hookups



## REGULAR WALK-IN SITES

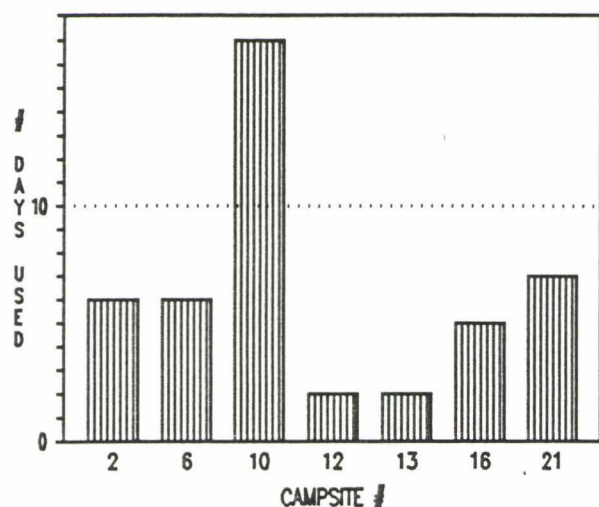
The walk-in sites in Seneca Shadows are the most challenging within respect to determining why certain one were chosen. On the ground they appear nearly identical in most cases. The camps are close together, in a large open field. The sense of room, so important in other sites is difficult to observe here. The four most popular sites account for nearly

one third of the use. As a result, 19 of the 30 sites averaged use below the mean.

Rock climbers make up a large part of the user group here. They arrive at the camping area in small groups, loosely associated into large groups. There is more social interaction than in the rest of the campground. It appears that, after the first site is selected, subsequent sites may be selected with proximity to the already selected site an element in the decision. Use does appear to be clustered.



FIGURE 8 - SINGLE WALK-INS USE

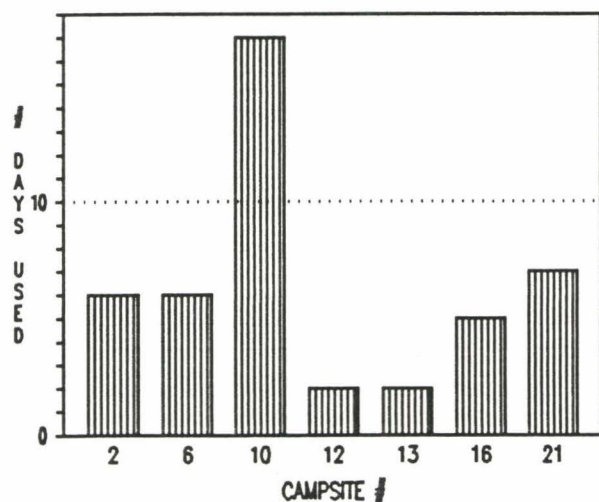


Two factors appear to affect choice here. The most popular sites (46, 47, 76, 79) are the closest single tent sites to the access points for the parking. The low sites (55, 73, 75) are among the most distant, however sites that are farther but offer separation from the other sites (71, 51) averaged use above the mean.

#### WALK-IN SITES WITH TWO TENTS.

It is uncertain whether these sites should be treated as a group separate from the single tent walk-ins. The extra cost of the sites (\$7 verses \$5) probably is not a significant element in determining the choice between the two. The use pattern is similar but average use of the doubles is slightly higher.

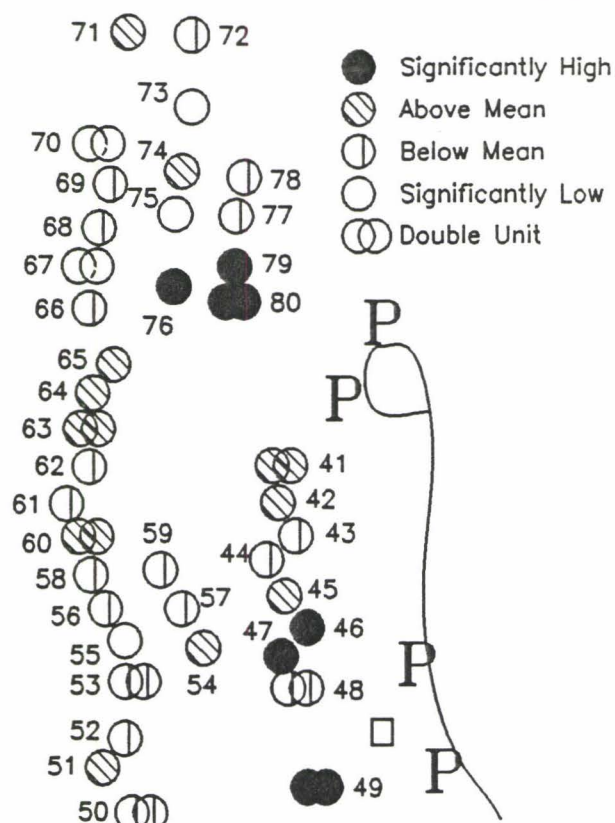
FIGURE 9 - DOUBLE WALK-IN SITES USE



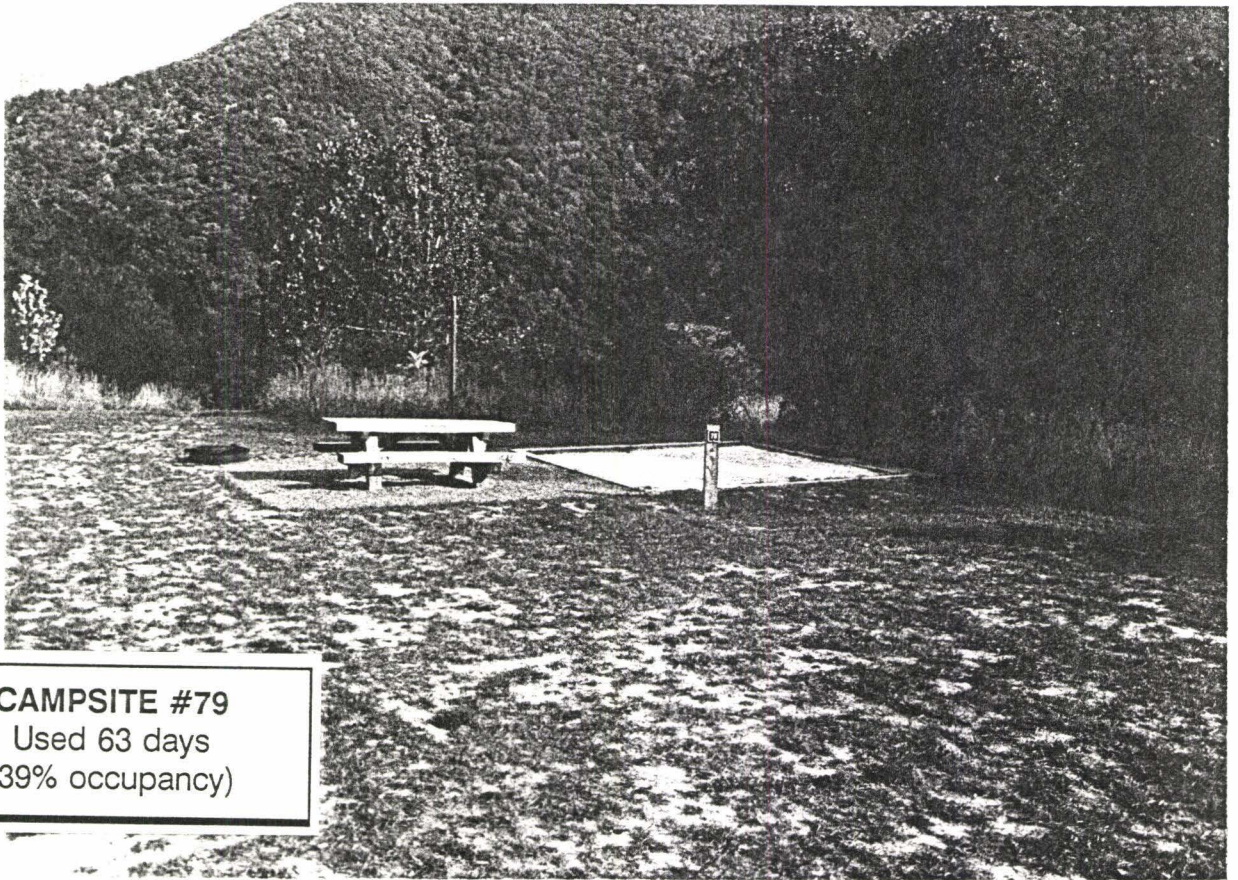
The most popular sites (49, 80) offer some isolation from the other sites yet are 2 of the 4 sites closest to the parking area. The least popular are distant and clustered in a group of other sites.

In conclusion, these sites appear to function as a group with the single walk-in. They may be slightly more popular because they offer more room and therefore more separation from the other sites.

## Seneca Shadows Walk-in Area

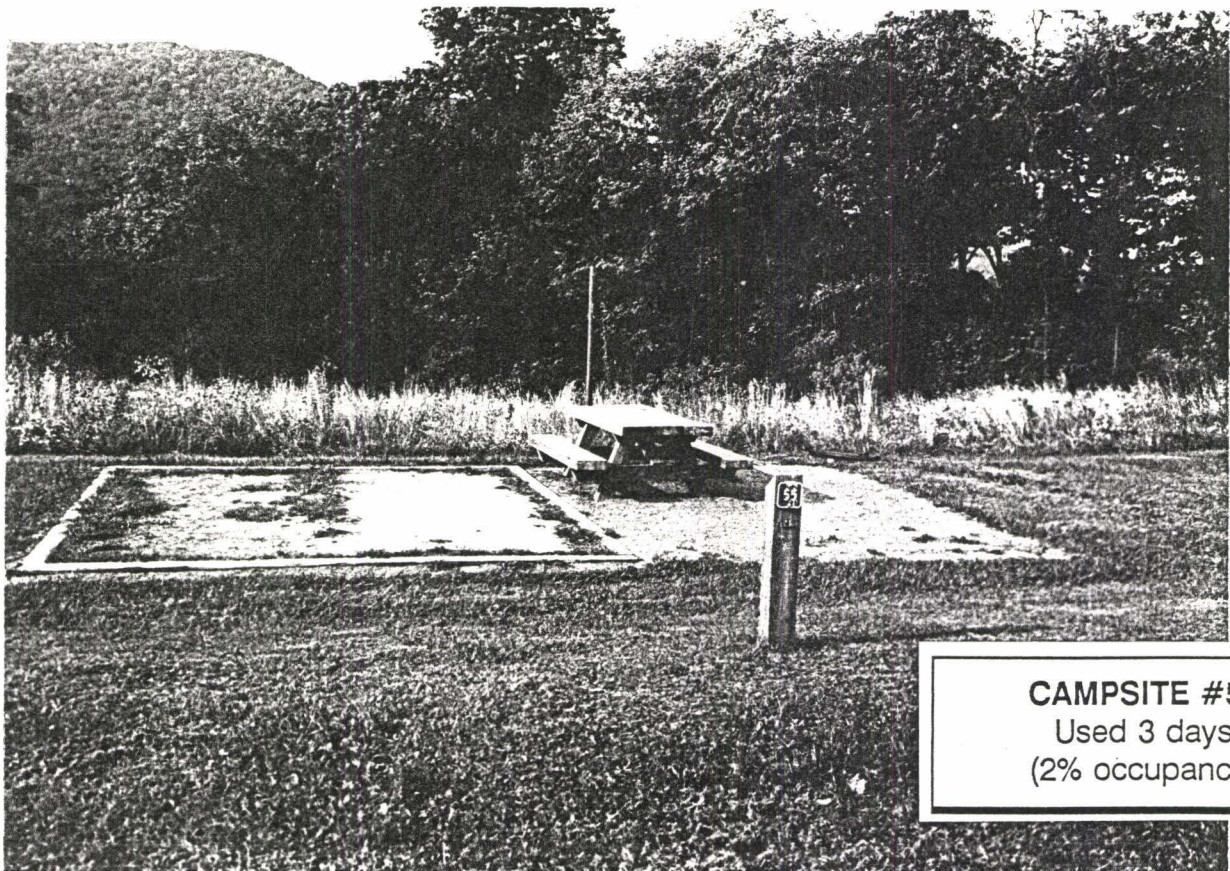






**CAMPSITE #79**  
Used 63 days  
(39% occupancy)

### SENECA SHADOWS WALK-INS EXAMPLES



**CAMPSITE #55**  
Used 3 days  
(2% occupancy)



## CONCLUSIONS

**Types of sites offered:** The single family, drive-in site is the most popular type of site and future campground design should continue to feature them.

Providing several, larger, double sites provides some variety of choice without reducing campsite utilization. At Big Bend and Spruce Knob Lake the double sites occupancy was near the mean for the campground. When these sites are offered at a significantly higher cost however they are seldom selected.

Providing for walk-in camping should be based on local site conditions. At Seneca Shadows, where a large component of the use is by rock climbers, the walk-in sites are popular. At Spruce Knob lake, where most users are fishermen and hunters using their vehicles for access the walk-ins are not popular and used as a last resort- the most popular walk-ins there are those most like a regular site. At Red Creek, the walk-ins received more use than some of the drive-in sites.

The three group sites in Seneca Shadows are designed for about 40 persons or about 5 families. They were popular and similar opportunities may do well at other sites.

**Campsite Design:** Popular campsites cannot be determined from the site plan. Proximity to recreation features near the campground affects but does not determine campsite selection.

Well defined sites are the most popular. Comparing the campsite to a cave or room is useful. Enclosure both overhead and surrounding the site is important in defining the space. Wall-like barriers of vegetation at least waist high and branches just overhead are appealing. Steps make an acceptable room delineator provided there are not too many and they are

wide. Cut banks and other ground forms may also serve this function. Edges of fill slopes (the camp on top) are not likely to make an acceptable room delineator.

Complete enclosure is not desired. Breaks in the 'walls' providing views into the outside world (like the mouth of a cave or a window in a wall) enhance the site. Translucency, where the vegetation defines the wall but does not fully block views into the forest also may afford this quality.

Size is important, sites should not be crowded against the parking spur nor too small. Sites two to three times the minimum needed for the table, stove and tent seem optimum. When larger they lose the room-like qualities.

Levelness of the parking spur is a key element in RV sites, however once that criterion is met the other features match those of other sites.

Only when 'room' features are absent or equal do distance to toilets, water or parking become a consideration in determining site selection.

**Summary:** good campsites are places that meet basic psychological aspirations beyond pure physical needs. It is difficult to create these places in a short period of time. **We need to change our design sequence to identify the existing camping places within an area which is to become a campground. We need to preserve those places and attempt to create more through careful site manipulation. Roads, toilets and utilities should be designed around the camping places.** We fail to fully satisfy the visitor simply by providing a table, grill and tent pad plopped down along a beautifully engineered road and state-of-the-art toilet. The high cost of campgrounds make it essential that we pay special attention to the places people are coming there to use and enjoy.

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